

# ecology and environment, inc.

160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811

(333)

2093227

International Specialists in the Environment

#### **MEMORANDUM**

TO:	Paul La Courreye, EPA Region IX Site Screening Coordinator
FROM:	Jim James, Ecology and Environment, Inc.
DATE:	December 15, 1989
SUBJECT:	Completed Work
cc:	Marcia Brooks, E & E, Inc.
Attached is	the following completed:
PA	PA Review SSI LSI SIRe
Other PA Re	-evaluation
Site Name:	Pacific Engineering & Production Company of Nevada
EPA ID #:	NVD008506974
City, County	: Henderson, Clark County
State Recomm (for Reviews	
	FOR EPA USE ONLY

orthodo

PA-2 Complete Pal 1.25.90 M 58/

kz/pepcon/cwm

CERCLIS Lead:



## ecology and environment, inc.

160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811

International Specialists in the Environment

#### PRELIMINARY ASSESSMENT RE-EVALUATION

SUBMITTED TO:

Paul La Courreye, Site Screening Coordinator

**EPA Region IX** 

PREPARED BY:

Kathy Zavitz, Ecology and Environment, Inc.

THROUGH:

Lorene Flaming, Ecology and Environment, Inc.

DATE:

December 15, 1989

SITE:

Pacific Engineering & Production Company of

Nevada-PEPCON, dated May 20, 1980

TDD#:

F9-8909-028

BPA ID#:

NVD008506974

PROGRAM ACCOUNT#: FNV1007PBA

FIT REVIEW/CONCURRENCE:

cc: FIT Master File

#### INTRODUCTION

Under Technical Directive Document number F9-8909-028, Ecology and Environment, Inc.'s Field Investigation Team (FIT) has been tasked to reassess all Preliminary Assessments (PAs) in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) with "active" or "pending" status according to guidelines established to implement the Superfund Amendments and Reauthorization Act (SARA). During the course of this reassessment process, PAs were identified that contained insufficient information to allow an accurate reassessment. FIT has been subsequently directed to reevaluate and upgrade these PAs as needed to ensure that an accurate response determination is made.

The strategy for determination of further action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is based solely on each site's potential to achieve a score high enough on the proposed revised Hazard Ranking System (rHRS) for inclusion on the National Priorities List (NPL). This strategy is intended to identify those sites posing the highest relative risk to human health or the

kz/pepcon/prv

environment. All other sites needing remedial or enforcement follow-up will be referred to the states or an appropriate federal agency.

The following is a summary of FIT's findings with regard to this site.

#### SUMMARY

Pacific Engineering & Production Company of Nevada (PEPCON) is a 700-acre site located at 8201 Gibson Road in Henderson, Nevada. The major population centers near the site are Las Vegas and Henderson, Nevada. The facility manufactured ammonium perchlorate for use as a solid rocket fuel oxidizer in the space shuttle program. Ammonium perchlorate is classified as a Class A explosive. The facility also manufactured odor control and disinfectant equipment. Operations began at the site in 1958. The facility employed approximately 120 workers until 1988 when an explosion destroyed the plant. The neighboring Kidd Marshmallow Factory was also destroyed (1).

A Resource Conservation and Recovery Act Facility Investigation Report dated May 21, 1981 stated that the company did not store, generate, or transport any hazardous wastes, and no RCRA violations were observed during that investigation (2).

The production of ammonium perchlorate begins with the reaction of ammonium hydroxide and 33% hydrochloric acid, which produces ammonium chloride. The ammonium chloride is then reacted with sodium perchlorate to form ammonium perchlorate. This slurry product is then dried to form a solid crystalline substance. Lead was used in the PEPCON process to prolong the life of the graphitic anodes. The company would reclaim lead dioxide from the anodes (3).

Waste water from the plant operations discharged to an evaporation pond on site. The Nevada Department of Environmental Protection (NDEP) reported that an analysis of the pond's contents revealed no hazardous materials. The waste water consisted of cooling tower blowdown and boiler blowdown. This pond was bermed and had a clay lining. The lining was tested periodically, and the results were reported to NDEP (1,4).

PEPCON burned an unknown quantity of wastes on site before the mid-1960s (1).

An explosion occured May 4, 1988, which destroyed the PEPCON facility and the neighboring candy factory. A considerable portion of PEPCON's inventory of almost 9 million pounds of ammonium perchlorate was detonated. The resulting fire involved hazardous substances such as ammonium perchlorate, hydrochloric acid, and ammonia. The explosion killed two people, injured more than 300, and caused massive property damage. PEPCON and the surrounding desert were covered with debris from the explosion. EPA's Technical Assistance Team (TAT) performed emergency stabilization after the explosion.

TAT conducted on-site wipe sampling for polychlorinated biphenals (PCBs), polychlorinated dibenzo-p-dioxin (PCDD), and dibenzo-p-furan (PCDF). The sampling was undertaken because a leaking transformer containing PCBs was

kz/pepcon/prv

involved in the fire. Thus, there was the potential for PCDF and PCDD formation. PCBs were detected in the vicinity of the leaking transformer.

After the fire, PEPCON conducted its own cleanup. Open lead containers were capped and secured to reduce possible airborne emissions. A leaking transformer was also repaired. Two anhydrous ammonia tanks and the concentrated hydrochloric acid tank were sold and transported to Stauffer Chemical Company, approximately 1 mile east of the PEPCON facility.

A pre-fire inventory of the facility indicated that 8.5 million pounds of solid ammonium perchlorate were stored on site prior to the explosion. Also on site were 116,807 pounds of anhydrous ammonia, 67,631 pounds of hydrochloric acid, 21,012 pounds of ammonium chloride, 202,080 pounds of ammonium perchlorate, 1.5 million pounds of perchlorate, 801,207 pounds of sodium chlorate, and 17,421 pounds of sodium hydroxide (3).

The major known contaminant on site was lead oxide found in a dry wash northeast of the former visitor's parking lot at PEPCON (4). Although approximately 11,000 pounds of lead oxide spilled as a result of the explosion, sampling showed high concentrations of lead in the wash at depths of 10 to 13 inches, which indicates that lead was deposited over time rather than being solely disposited from the explosion. The alternating layers of lead oxide and soil in the wash deposits indicate that the lead was probably carried as a suspended load in episodic pulses of water down the wash. Lead was detected about 100 yards downstream of the wash (5). PEPCON officials stated that an estimated 12,000 gallons of lead sludge were dumped on facility property over the 30 years of operation (3).

The EPA Environmental Monitoring Services Laboratory—Las Vegas (EMSL-LV) used the X-ray fluorescence analysis to determine the extent of the lead contamination. EMSL-LV detected concentrations as high as 36.9 percent lead by weight in on-site soils. Off-site measurements with the x-ray fluorometer detected levels as high as 10 percent lead. The extent of the lead contamination appeared to be contained within the confines of the wash and Gibson Road. The road apparently provided a natural barrier to surface water migration, preventing lead from migrating beyond that point (5).

In May 1989 NDEP approved PEPCON's plan for removal of lead-contaminated soil. The removal process involved the excavation of the lead-contaminated soil and subsequent screening and separation of soil from cobbles (4). Approximately 35,000 cubic yards of soil have been removed to date. The soil was sprayed with water to minimize airborne particulates, and the water was evaporated in a lined evaporation pond (1). The lead sludge, pond liner, and lead-contaminated soils are being disposed of at the Beatty, Nevada landfill. At this time, PEPCON has not completed remedial action and NDEP is waiting for documentation confirming site cleanup (4).

PEPCON is located in the south-central portion of the Las Vegas Valley on a semi-arid alluvial fan system made up of anastomosing channel and flood

flow deposits. The soil consists principally of silt and sand. The direction of drainage flow is from southwest to northeast.

The depth to ground water in this area is estimated to be 40 feet (5). The water of the upper aquifer is naturally saline and is not used for any purpose. All of Clark County receives water from Lake Mead (6).

The dry wash on PEPCON property leads to the Las Vegas Wash, which empties into Lake Mead. Las Vegas Wash, the only nearby perennial stream, is located 4 miles north of the facility and consists primarily of Las Vegas and Henderson secondary sewage effluent (98%), irrigation return flow, and ground water seepage. The Wash empties into Lake Mead (a Colorado River reservoir) about 9 miles northeast of Henderson. The average flow of the Wash, 144 cubic feet per second (cfs), makes up only a fraction of the 12,400 cfs daily average that flows out of Lake Mead (7,8).

Lake Mead is located within the 1,500,000-acre Lake Mead National Recreation Area. The lake itself is about 500,000 acres (9). Recreational fishing on Lake Mead produces 1,800,000 pounds of fish per year. The razorback fish, present in Lake Mead, is a proposed federal endangered species (10).

Approximately 16 miles downstream from the site is the nearest drinking water intake. The intake is located on the east side of Saddle Island and serves a Clark County population of 463,087 (6).

An observed release of hazardous substances from the site to air occurred as a result of the May 4, 1988 explosion. The target population included the city of Henderson, which has a population of 24,363.

Nearby on-site populations include 70 workers at the rebuilt Kidd Marshmallow factory.

The 2-year, 24-hour rainfall for Henderson is 1 inch (11).

Potential habitats for sensitive animal and plant species as designated by the Nevada National Heritage Program include the Gila monster, desert tortoise, arctomecon California, and the penstemon bicolor. Information on the exact location of these plant and animal species is currently unavailable (12).

#### CONCLUSIONS

Pacific Engineering and Production Company of Nevada manufactured ammonium perchlorate until an explosion on May 4, 1988 destroyed the facility. The site has not been operational since that date. There was a significant quantity of chemicals on site before the explosion.

The extent of lead contamination and the effectiveness of the ongoing cleanup and removal are still uncertain. The Nevada Department of Environmental Protection has approved the facility's cleanup plan for the removal of the lead-contaminated soil.

Based on a preliminary screening, using the proposed revised Hazardous Ranking System, it appears that this facility may be eligible for inclusion on the National Priorities List due to the following factors:

- o Observed release to air;
- o A high potential for on-site exposure based on documented soil contamination; and
- o High waste toxicity and quantity.

BPA RECOMMENDATION	<u>Initial</u>	Date
No Further Remedial Action Planned	<u></u>	
High-Priority SSI		
Medium-Priority SSI	Pri	1.25.90

### REFERENCES

- 1. Rooker, Keith, PEPCON, and Kathy Zavitz, E & E FIT, telephone conversation, November 27, 1989.
- 2. RCRA Facility Investigation, EPA Region 9, performed by Randy Markus, May 21, 1981.
- 3. Ecology and Environment, Inc., "PEPCON On-Site Monitoring, Henderson, Nevada," Roman Worobel, Technical Assistance Team, E & E, Inc., San Francisco, CA, July 25, 1988.
- 4. Gross, Dan, and Joe Livak, NDEP, and Kathy Zavitz, E & E FIT, telephone conversations, November 21, 1989.
- 5. Lockheed Engineering and Sciences Company, "Special Report on the Distribution of Lead at the Pacific Engineering and Products Company of Nevada (PEPCON) Site Using X-Ray Fluorescence for On-Site Screening," U.S. EPA Environmental Monitoring Systems Laboratory; Las Vegas, Nevada, July 1988.
- 6. Monscvitz, Joe, Las Vegas Water District, and Rob Balas, E & E FIT, telephone conversation, August 31, 1989.
- 7. Prudic, Dave, U.S. Geological Survey, and Peter Towle, E & E FIT, telephone conversation, August 31, 1989.
- 8. Williams, Bruce, Bureau of Reclamation, and Peter Towle, E & E FIT, telephone conversation, October 5, 1989.
- 9. Hourie, Robin, Lake Mead Recreation Area, and Peter Towle, E & E FIT, telephone conversation, September 11, 1989.
- 10. Buck, David, State of Nevada, and Rob Balas, E & E FIT, telephone conversation, September 1, 1989.
- 11. U.S. Department of Commerce, Weather Bureau, Rainfall Frequency Atlas of the United States, Washington, D.C., 1961.
- 12. Clemmer, Glen, Nevada National Heritage Program, and Kathy Zavitz, E & E, FIT, telephone conversation, December 28, 1989.

AGENCY/AFFILIATION: PEPCON DEPARTMENT: ADDRESS/CITY: Henderson COUNTY/STATE/ZIP: Nevada CONTACT(S) TITLE PHONE 1. Keith Rooker 702-735-2200 Attorney 2. **DATE:** 11/27/89 E & E PERSON MAKING CONTACT: K. Zavitz SUBJECT: SITE NAME: PEPCON **BPA ID#:** NVD008506974

- PEPCON did not use BMI Ponds.
- PEPCON burned wastes on site pre mid-sixties.
- One pond on site. Evaporated cooling tower blowdown and boiler blowdown.
- Plating cells ruptured during explosion. Plating solution went onto soil north of parking lot. 35,000 yards of contaminated soil have been removed so far.
- 120 people worked at facility before explosion.
- One pond-100 ft. X 300 ft. Clay lining. Test results submitted to NDEP.

AGENCY/AFFILIATION: Nevada Dept. of Environmental Protection DEPARTMENT: Waste Management Office ADDRESS/CITY: 201 South Fall Street, Carson City COUNTY/STATE/ZIP: Nevada TITLE PHONE CONTACT(S) 1. Dan Gross Waste Management 702-885-4670 2. Joe Livak Water Quality Enforcement Off. 702-885-4670 E & E PERSON MAKING CONTACT: K. Zavitz **DATE:** 11/21/89 SUBJECT: SITE NAME: PEPCON **EPA ID#:** NVD008506974

- Major known contamination from explosion is lead from lead oxide tank spill. 11,000+ gallons of lead oxide spilled.
- May 19, 1989 NDEP approved PEPCON's plan for removal of lead contaminated soil and the screening (separation) of cobbles from soil. NDEP still has not received a final report on the clean-up or extent of contamination.
- PEPCON is in an alluvial fan-with big rocks and cobbles. During the clean-up of lead contaminated soil, PEPCON picked up everything. They proposed to screen out cobbles from soil. Clark County monitored air quality during the operation. Area was wetted down and screened. Sludge was put in a evaporation pond. Sludge and liner were shipped to Beatty, Nevada.
- Contents of PEPCON pond was analyzed and determined to be innocuous.

AGENCY/AFFILIATION: Las Vegas Valley Water District

DEPARTMENT: Southern Nevada Water Board

ADDRESS/CITY: Boulder City

COUNTY/STATE/ZIP: Nevada

CONTACT(S) TITLE		PHONE
1. Joe Monscvitz	Dir. Treatment & Transmission	702/486-6741
2.		
E & E PERSON MAKING CONTA	CT: Rob Balas	DATE: 8/31/89

SUBJECT: Water Intakes Out of Lake Mead

SITE NAME: Montrose EPA ID#: NVD008237489

One intake - east side of Saddle Island 160 ft. below surface 110 ins. in diameter

Serves all of Clark County population of 463,087.

AGENCY/AFFILIATION: United St	tates Geological Survey	
DEPARTMENT:		
ADDRESS/CITY: Carson City		
COUNTY/STATE/ZIP: Nevada		
CONTACT(S)	TITLE	PHONE
1. Dave Prudic		702/887-7611
2.		
E & E PERSON MAKING CONTACT:	Peter Towle	DATE: 8/31/89
SUBJECT: Various River Discha	arge Flow Into Lake Mead	
SITE NAME: Kerr-McGee		EPA ID#: NVD008290330

- Virgin River (metered near Littlefield)
- 262 CFS ave. annual
- 1988 figure

- 2) Las Vegas Wash
   (metered near Henderson)
- 144 CFS 98% sewage treatment effluent ave. annual
- 1988 figure

3) Muddy River
 (near Overton)

- 40 CFS
- 1988 figure

AGENCY/AFFILIATION: Bureau of	f Reclamation		
DEPARTMENT: River Operations	and Policy		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
ADDRESS/CITY: Boulder City		·	
COUNTY/STATE/ZIP: Clark Count	ty, Nevada		· · · · · · · · · · · · · · · · · · ·
CONTACT(S)	TITLE		PHONE
1. Bruce Williams	Hydraulic Engineer		702/293-8525
2.			
E & E PERSON MAKING CONTACT:	Peter Towle		DATE: 10/5/89
SUBJECT: Average Water Flow (	Out of Lake Mead		· · · · · · · · · · · · · · · · · · ·
SITE NAME: Kerr-McGee EF		EPA ID#:	NVD008290330

The 1989 average flow, per day, out of Lake Mead into the Colorado River is 12,400 (cfs).

AGENCY/AFFILIATION: Lake Mead National Recreation Area **DEPARTMENT:** Visitors Information ADDRESS/CITY: Boulder City COUNTY/STATE/ZIP: Nevada CONTACT(S) TITLE PHONE 1. Robin Hourie 702/293-8907 Secretary 2. E & E PERSON MAKING CONTACT: Peter Towle **DATE:** 9/11/89 10/5/89 SUBJECT: Lake Mead SITE NAME: Kerr-McGee EPA ID#: NVD008290330

- Lake Mead is a National Recreation area. The lake itself is greater than 500 acres in area.
- Lake Mead is used for recreational fishing only.

## 10/5/89

- Surface area of Lake Mead: 500,000 acres.

AGENCY/AFFILIATION: State of Nevada

DEPARTMENT: Welfare

ADDRESS/CITY: Las Vegas

COUNTY/STATE/ZIP: Nevada

CONTACT(S)	PHONE	
1. David Buck	Supervising Biologist for Southern Nevada	702/986-5127
2.		
E & E PERSON MAKING CONTACT	: Rob Balas	DATE: 9/1/89 ·

SUBJECT: Total Poundage Taken Out of Lake Mead

SITE NAME: Montrose EPA ID#: NVD008237489

Total poundage - 1,804,720 pounds

Number of fish - 902,360

Average weight of fish - 2 pounds

Razorbacks proposed federal endangered species

AGENCY/AFFILIATION: Henderson City Public Works DEPARTMENT: Flood Control Board ADDRESS/CITY: Henderson COUNTY/STATE/ZIP: Clark County, Nevada CONTACT(S) TITLE PHONE 1. Janie Nihipali 702/565-2140 Secretary 2. E & E PERSON MAKING CONTACT: Peter Towle **DATE:** 8/31/89 10/5/89 SUBJECT: Flood Plain and Drainage Area of BMI Complex EPA ID#: NVD008290330 SITE NAME: Kerr-McGee

## 8/31/89

To the best of Ms. Nihipali's knowledge, the BMI complex lies in a flood Zone C. Flood Zone C is considered a minimal flood hazard (less than 500 year frequency).

## 10/5/89

Pabco Road is intersected by a Zone A flood zone.

AGENCY/AFFILIATION: Nevada Na	atural Heritage Program			
DEPARTMENT:				
ADDRESS/CITY: 201 S. Fall Str	reet, Carson City			
COUNTY/STATE/ZIP: Nevada, 89	710		······································	
CONTACT(S)	TITLE		РНО	NE
1. Glen Clemmer	Zoologist		702-8	85-4370
2.				
E & E PERSON MAKING CONTACT:	K. Zavitz		DATE:	12/28/89
SUBJECT: Endangered Species	Habitats			
SITE NAME: State Industries		EPA ID	<b> :</b>	

The following sensitive animal and plant species, as designated by the Nevada National Heritage Program, may be found in the Henderson area:

- Gile Monster
- Desert tortoise
- Arctomecon California, and the
- Penstemon bicolor

## FIELD PHOTOGRAPHY LOG SHEET

Photo	graph i
DATE:	4/28/89

TIME: 10:45 AM PM

DIRECTION:

northeast

WEATHER:

cloudy, cool

PHOTOGRAPHED BY:

D. Hafley

DESCRIPTION:

Overview of approx. 5 acre dump site. Note house on far site of dump.

Photograph 2

DATE: 4/28/89

TIME 10:46 AM PM

DIRECTION:

north

WEATHER:

cloudy, cool

PHOTOGRAPHED BY:

D. Hafley

DESCRIPTION:



Overview of dump looking north towards Ely. Note concrete rubble and rusted metal parts at surface of dump.

d/guide/bt

## FIELD PHOTOGRAPHY LOG SHEET

Photograph 3 DATE: <u>4/28/89</u> TIME: 10:32AMxPM DIRECTION: southwest WEATHER: cloudy, light snow PHOTOGRAPHED BY: D. Hafley

### DESCRIPTION:

View of dump site from northeast corner, giving an indication of thickness of refuse at the site.

Photograph 4 DATE: 4/28/89 TIME 10:45 AM PM DIRECTION: northeast WEATHER: cloudy, cool PHOTOGRAPHED BY: D. Hafley



DESCRIPTION:

Closeup view of car bodies, scrap wood, and concrete rubble disposed at the Old White Pine County Dump site.

## FIELD PHOTOGRAPHY LOG SHEET

Photograph 5 **DATE:** <u>4/28/89</u>

TIME: 10:37 AMK PM

DIRECTION:

south-southwest

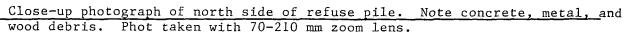
WEATHER:

cloudy, light snow

PHOTOGRAPHED BY:

D. Hafley

## DESCRIPTION:



DATE: 4/28/89

TIME 10:52 Att PM

DIRECTION:

north

WEATHER:

cloudy, cool

PHOTOGRAPHED BY:

D. Hafley

DESCRIPTION:

Close-up of rusted metal cans and mattress springs; photograph taken at southwest end of dump site.

AGENCY/AFFILIATION: PEPCON **DEPARTMENT:** ADDRESS/CITY: Henderson COUNTY/STATE/ZIP: Nevada CONTACT(S) TITLE PHONE 702-735-2200 1. Keith Rooker Attorney 2. **DATE:** 11/27/89 E & E PERSON MAKING CONTACT: K. Zavitz SUBJECT: SITE NAME: PEPCON **BPA ID#:** NVD008506974

- PEPCON did not use BMI Ponds.
- PEPCON burned wastes on site pre mid-sixties.
- One pond on site. Evaporated cooling tower blowdown and boiler blowdown.
- Plating cells ruptured during explosion. Plating solution went onto soil north of parking lot. 35,000 yards of contaminated soil have been removed so far.
- 120 people worked at facility before explosion.
- One pond-100 ft. X 300 ft. Clay lining. Test results submitted to NDEP.

AGENCY/AFFILIATION: Nevada Dept. of Environmental Protection **DEPARTHENT:** Waste Management Office ADDRESS/CITY: 201 South Fall Street, Carson City COUNTY/STATE/ZIP: Nevada CONTACT(S) TITLE PHONE 1. Dan Gross Waste Management 702-885-4670 2. Joe Livak Water Quality Enforcement Off. 702-885-4670 E & E PERSON MAKING CONTACT: K. Zavitz **DATE:** 11/21/89 SUBJECT: SITE NAME: PEPCON **EPA ID#:** NVD008506974

- Major known contamination from explosion is lead from lead oxide tank spill. 11,000+ gallons of lead oxide spilled.
- May 19, 1989 NDEP approved PEPCON's plan for removal of lead contaminated soil and the screening (separation) of cobbles from soil. NDEP still has not received a final report on the clean-up or extent of contamination.
- PEPCON is in an alluvial fan-with big rocks and cobbles. During the clean-up of lead contaminated soil, PEPCON picked up everything. They proposed to screen out cobbles from soil. Clark County monitored air quality during the operation. Area was wetted down and screened. Sludge was put in a evaporation pend. Sludge and liner were shipped to Beatty, Nevada.
- Contents of PEPCON pond was analyzed and determined to be innocuous.

DEPARTMENT: Southern Nevada Water Board

ADDRESS/CITY: Boulder City

COUNTY/STATE/ZIP: Nevada

CONTACT(S)

TITLE

PHONE

1. Joe Monscvitz

Dir. Treatment & Transmission

702/486-6741

E & E PERSON MAKING CONTACT: Rob Balas DATE: 8/31/89

SUBJECT: Water Intakes Out of Lake Mead

2.

SITE NAME: Montrose EPA ID#: NVD008237489

One intake - east side of Saddle Island 160 ft. below surface 110 ins. in diameter

Serves all of Clark County population of 463,087.

AGENCY/AFFILIATION: Las Vegas Valley Water District

AGENCY/AFFILIATION: United S	tates Geological Survey		
DEPARTMENT:			
ADDRESS/CITY: Carson City		·	
COUNTY/STATE/ZIP: Nevada			
CONTACT(S)	TITLE		PHONE
1. Dave Prudic			702/887-7611
2.			
E & E PERSON MAKING CONTACT:	Peter Towle		DATE: 8/31/89
SUBJECT: Various River Discha	arge Flow Into Lake Mead		L
SITE NAME: Kerr-McGee		EPA ID	*: NVD008290330

1)	Virgin River (metered near Littlefield)	- 262 CFS ave. annual	1988 figure
2)	Las Vegas Wash (metered near Henderson)	- 144 CFS 98% sewage treatment effluent ave. annual	1988 figure
3)	Muddy River (near Overton)	- 40 CFS	1988 figure

AGENCY/AFFILIATION: Bureau of Reclamation DEPARTMENT: River Operations and Policy ADDRESS/CITY: Boulder City COUNTY/STATE/ZIP: Clark County, Nevada CONTACT(S) TITLE PHONE 1. Bruce Williams Hydraulic Engineer 702/293-8525 2. E & E PERSON MAKING CONTACT: Peter Towle **DATE:** 10/5/89 SUBJECT: Average Water Flow Out of Lake Mead SITE NAME: Kerr-McGee EPA ID#: NVD008290330

The 1989 average flow, per day, out of Lake Mead into the Colorado River is 12,400 (cfs).

AGENCY/AFFILIATION: Lake Mead National Recreation Area **DEPARTMENT:** Visitors Information ADDRESS/CITY: Boulder City COUNTY/STATE/ZIP: Nevada TITLE PHONE CONTACT(S) 1. Robin Hourie 702/293-8907 Secretary 2. **DATE:** 9/11/89 E & E PERSON MAKING CONTACT: Peter Towle 10/5/89 SUBJECT: Lake Mead SITE NAME: Kerr-McGee EPA ID#: NVD008290330

- Lake Mead is a National Recreation area. The lake itself is greater than 500 acres in area.
- Lake Mead is used for recreational fishing only.

## 10/5/89

- Surface area of Lake Mead: 500,000 acres.

AGENCY/AFFILIATION: State of Nevada

DEPARTMENT: Welfare

ADDRESS/CITY: Las Vegas

COUNTY/STATE/ZIP: Nevada

CONTACT(S)	TITLE	PHONE
1. David Buck	Supervising Biologist for Southern Nevada	702/986-5127
2.		
E & E PERSON MAKING CONTACT: Rob Balas		DATE: 9/1/89

SUBJECT: Total Poundage Taken Out of Lake Mead

SITE NAME: Montrose EPA ID#: NVD008237489

Total poundage - 1,804,720 pounds

Number of fish - 902,360

Average weight of fish - 2 pounds

Razorbacks proposed federal endangered species

AGENCY/AFFILIATION: Henderson City Public Works DEPARTMENT: Flood Control Board ADDRESS/CITY: Henderson COUNTY/STATE/ZIP: Clark County, Nevada CONTACT(S) TITLE PHONE 1. Janie Nihipali Secretary 702/565-2140 2. E & E PERSON MAKING CONTACT: Peter Towle **DATE:** 8/31/89 10/5/89 SUBJECT: Flood Plain and Drainage Area of BMI Complex EPA ID#: NVD008290330 SITE NAME: Kerr-McGee

## 8/31/89

To the best of Ms. Nihipali's knowledge, the BMI complex lies in a flood Zone C. Flood Zone C is considered a minimal flood hazard (less than 500 year frequency).

## 10/5/89

Pabco Road is intersected by a Zone A flood zone.

AGENCY/AFFILIATION: Nevada Natural Heritage Program

DEPARTMENT:

ADDRESS/CITY: 201 S. Fall Street, Carson City

COUNTY/STATE/ZIP: Nevada, 89710

CONTACT(S)

TITLE
PHONE

1. Glen Clemmer
Zoologist
702-885-4370

2.

E & E PERSON MAKING CONTACT: K. Zavitz

DATE: 12/28/89

SUBJECT: Endangered Species Habitats

SITE NAME: State Industries

EPA ID#:

The following sensitive animal and plant species, as designated by the Nevada National Heritage Program, may be found in the Henderson area:

- Gile Monster
- Desert tortoise
- Arctomecon California, and the
- Penstemon bicolor